



VOSSIUS & F EP 047906
PATENTANWALTE • RECHTSANWALTE
SIEBERTSTR. 4
81675 MÜNCHEN
1 2. Aug. 2005

PCT/EP2004/011876 3M ESPE AG Our Ref.: H2720 PCT

Claims

- 1. A device for storing and dispensing a flowable substance, comprising: a container comprising
 - a base member and a cover member being sealingly connected with each other along the circumference of the container,
 - at least one compartment for receiving said substance, and
 - an open ended pocket area into which said substance is transferable from said at least one compartment, and
 - a cannula having an internal passageway being in a fluid communication with said pocket for dispensing said substance, wherein said cannula is a separate component having a first end and a second end, said first end being associated with said open end of said pocket area.
- 2. The device of claim 1, wherein said first end comprises an extension part having a portion with an increased cross-section.
- 3. The device of claim 2, said extension part having a cross-sectional shape comprising sharp edges in the plane between the base member and the cover member, and preferably comprises a rhombic or fin-like cross-sectional shape.
- 4. The device of claim 1, wherein said extension part comprises at least one portion having an increased diameter.
- 5. The device of claim 1, wherein said extension part comprises a portion being tapered along the length thereof, with the thickness of the tapered portion decreasing towards said first end.
- 6. The device of claim 5, wherein said tapered portion comprises an U-shaped sealing area on each of the opposing surfaces of said tapered portion, the legs of said U-shaped

sealing areas extending towards said first end and being connected at the edge of said first end.

- 7. The device of any of claims 1 to 6, wherein said first end is attached to said open ended pocket area by means of a heat seal, a press fit, and/or an adhesive.
- 8. The device of claim 1, wherein said first end comprises an extension part adapted for being attached to the outer surface of said container.
- 9. The device of claim 8, wherein said extension part is attachable to said cover member.
- 10. The device of claim 8 or 9, wherein said extension part comprises a first portion and a second portion being inclined relative to said first portion.
- 11. The device of claim 8, 9, or 10, wherein said cannula is inclined relative to said extension part.
- 12. The device of any of claims 8 to 11, wherein said internal passageway of said cannula extends through said extension part.
- 13. The device of claim 12, wherein said extension part comprises a recess in the surface that attachable to said container, said recess being adjacent to and surrounding said passageway opening.
- 14. The device of claim 13, wherein said recess is ring shaped.
- 15. The device of claim 13 or 14, wherein said extension part comprises a raised portion adjacent to and surrounding said passageway opening, said recess surrounding said raised area.
- 16. The device of claim 1, said separate cannula being attached to said cover member, whereby said fluid communication with said pocket is established through said cover member.

- 17. The device of any of claims 1 to 16, wherein said cannula comprises a dosing means having a variable volume, preferably are bellow.
- 18. The device of any of claims 1 to 18, wherein said cannula further comprises an applicator at said second end for applying said substance to a treatment area.
- 19. The device of claim 18, wherein said applicator comprises bristles being integrally formed with said second end of said cannula, or comprises a foamed material, a non-woven material, or a plurality of fibres incorporated into said second end of said cannula.
- 20. The device of any of claims 1 to 19, wherein said internal passageway of said cannula further comprises flow resistors, preferably formed by structured surfaces, constricted portions, and/or orifices.
- 21. The device of any of claims 2 to 7, said extension part further comprising stiffening elements extending away from said extension part.
- 22. The device of any of claims 1 to 21, said base member being formed as a sheet.
- 23. The device of claim 22, said base member sheet being a deep-drawn sheet formed of a polypropylene layer, an aluminium layer, and a polyethylene layer.
- 24. The device of any of claims 1 to 21, said cover member being formed as a sheet, preferably being formed of a polyethylene terephthalate layer, an aluminium layer, and a polyethylene layer.
 - 25. The device of any of claims 1 to 21, said cover member being formed as a plastic part, preferably as an injection moulded part.
- 26. The device of any of claims 1 to 25, further comprising a portion separating said compartment from said pocket, said separating portion comprising a passage area adapted to be selectively opened by pressure effective on said passage area for placing said compartment in communication with said pocket.



- 27. The device of any of claims 1 to 26, comprising two or more compartments for holding different substances, and a passage area adapted to be selectively opened for placing said compartments in communication with each other prior to dispensing the mixed final substance.
- 28. The device of any of claims 1 to 27, said cannula further comprising mixing means.
- 29. The device of claim 28, said mixing means comprising mixing helixes or elements providing flow resistance.
- 30. The device of any of claims 1 to 29, further comprising a handle.
- 31. The device of any of claims 1 to 30, wherein the container is pre-filled.
- 32. Set comprising a device according to any of claims 1 to 31 and a separate applicator.
- 33. Set comprising a plurality juxtaposed devices according to any of claims 1 to 31.
- 34. Set according to claim 33, further comprising a separate applicator.
- 35. Set according to claim 33 or 34, wherein at least one device is filled with a different substance than the other devices.